

DXA-100/200 - R Series Accelerometer

Digital Output - Single or Dual Axis for railway applications. Meets CENELEC/AREMA Standards

The Jewell DXA-100/200-R Series

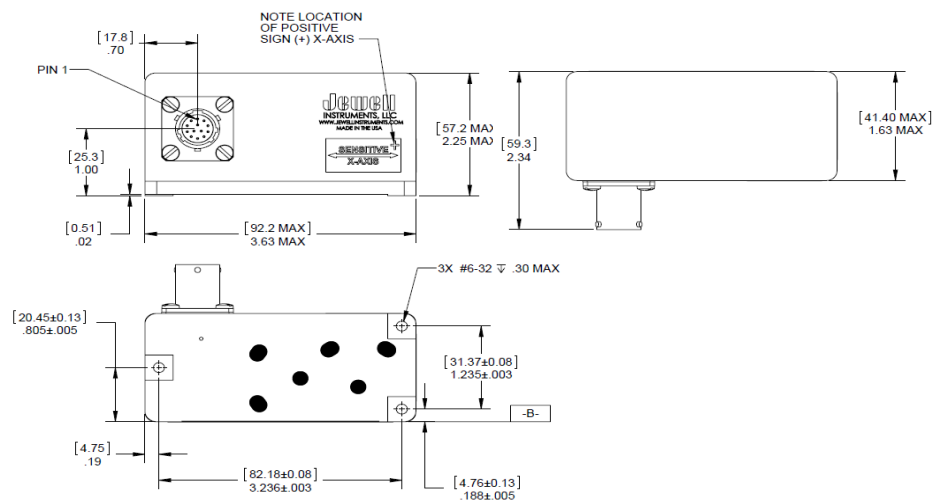
single or dual digital accelerometer
takes Jewell's highly accurate analog
closed loop sensor technology to
the next level.



Outline Diagram: DXA-100/200 Series Digital Accelerometer

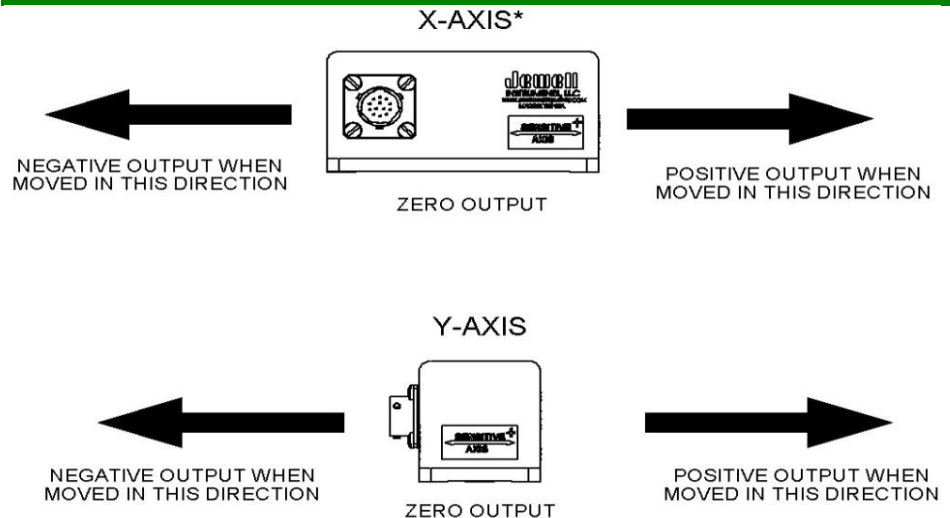
Features & Benefits

- Digital output
 - Resolution 8 μ g
 - Mechanical Shock 1500g 1msec half sine
 - Industry Standard EIA-RS485 and EIA-RS422 output
 - For use in high shock and vibration environments
 - High Precision and Performance
 - Low Noise
 - Meets CENELEC/AREMA Standards
- See Spec Table page 2



Applications

- Radar/Antenna Control
- Structural Monitoring
- Linear Acceleration/Deceleration Measuring
- Automatic Train Position Control
- Seismic Monitoring
- Platform Leveling



*FOR DXA-100 SERIES SENSITIVE AXIS THIS DIRECTION ONLY

Jewell Instruments LLC, 850 Perimeter Road, Manchester, NH 03103
sales@jewellinstruments.com • www.jewellinstruments.com • Tel (800) 227-5955

DXA-100/200-R Series Accelerometer



Making Sense out of Motion...

Performance

Input Range ¹ , g	±0.25	±0.50	±0.87	±1.00	±2.00
Number of Axis	1,2	1,2	1,2	1,2	1,2
Non Linearity ² , %FRO, Max	0.02	0.02	0.03	0.05	0.03
Scale Factor Tolerance, % Max	0.05	0.05	0.05	0.05	0.05
Bias, mg	1.00	1.00	1.00	1.00	1.00
Bias Thermal Sensitivity, mg	90	90	90	90	90
Bandwidth (-3dB), Hz, Nom ³	30	30	30	30	30
Transverse Axis Misalignment, °, Max	0.5	0.5	0.5	0.5	0.5

Digital Output

Interface	EIA-RS485 (default)/EIA-RS422				
Protocol	Proprietary (Custom)				
Output Representation	g's				
Baud Rate ⁴	19200	38400	57600	115200	230400

Electrical

Supply Voltage, Volts DC	10 to 30				
Input Current, mA, Max	Transmitting	DXA-100-R 32 mA/DXA-200-R 50 mA			
	Not transmitting	DXA-100-R 22 mA/DXA-200-R 40 mA			

Environmental

Operational Temp Range, °C	-40 to +70				
Storage and Temp Range, °C	-40 to +75				
Protection Class per IEC 529	IP67				
NEMA Enclosure Rating	6				
Shock Survival	1500g, 1msec, ½ sine				
Vibration Survival, grms (20Hz to 2 KHz)	20				

Enclosure

Housing Material	Anodized Aluminum				
Weight	DXA-100-R 8 oz [226.80 g]/ DXA-200-R 10 oz [283.50 g]				
Connector Type	MS27476Y10D35P				
Recommended Mating Connector	MS27473T10B35S				

NOTES:

- 1- Full range is defined as "from negative full input angle to positive full input angle"
- 2 - Non-linearity is specified as deviation of output referenced to a best fit straight line, independent of misalignment.
- 3 - In default condition without averaging.
- 4- Default Baud Rate is 38400

Meets CENELEC/AREMA Standards

CENELEC EN 55022:2010

CENELEC EN 50155:2007

CENELEC EN 61000-4-8:2010

AREMA Part 11.5.1

Jewell Instruments LLC, 850 Perimeter Road, Manchester, NH 03103
sales@jewellinstruments.com • www.jewellinstruments.com • Tel (800) 227-5955